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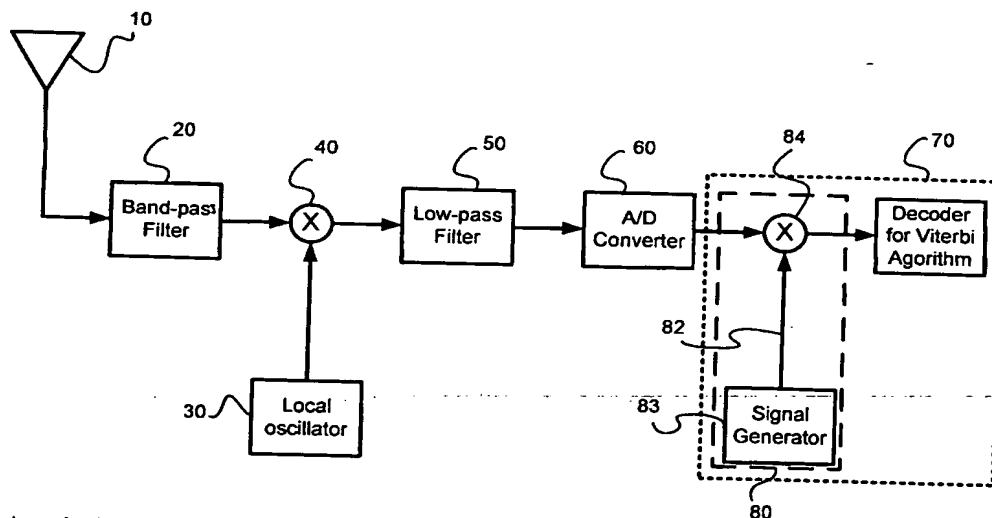
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(54) Title: METHOD AND SYSTEM FOR APPLYING VITERBI TYPE PSK DEMODULATION FOR OPTIMUM CORRELATION OF GPS SIGNALS



(57) Abstract: A method and system of improving sensitivity in the demodulation of a received signal over an arbitrary measurement time epoch, the method comprising the steps of: correlating the received signal in a coherent fashion (80); and utilizing a Viterbi phase state keying trellis demodulation with a variable resolution of phase states over 360° to demodulate the radio frequency phase trajectory of the signal throughout the measurement time epoch (70); and the system comprising a receiver for receiving a direct sequence spread spectrum signal, the receiver comprising: an antenna (10) for receiving the direct sequence spread spectrum signal; a downconverter (40) for downconverting the received signal, producing a downconverted signal; an analog to digital converter (60) to convert the downconverted signal to a digital signal; a despreader (80) for despreading and coherently correlating the digital signal to a known signal, creating a despread signal; and a processor (70) for applying a Viterbi algorithm to the despread signal.



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